

Appln. No. 10/689,139
Amendment
Reply to Office Action dated April 20, 2005

Docket No. 304-815

AMENDMENTS TO THE CLAIMS

This listing will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A sensor element device for a capacitive contact switch, in which said sensor element device has comprising a three-dimensional shape-variable, elastic, compressible body,
wherein said body is at least zonally electrically conductive,
wherein said sensor element device has an electrical contact zone for contact to a control and a sensor element surface,
wherein said body extends from said electrical contact zone to said sensor element surface and has different areas,
wherein one of said areas is a conductive area being electrically conductive throughout between said electrical contact zone and said sensor element surface, and another of said areas is an insulating area not being electrically conductive,
wherein there is at least one said insulating area between several of said conductive areas; and
wherein an insulating area forms a dielectric between two of said conductive areas in such a way that transverse capacitances or capacitive connections are formed between the said conductive areas.
2. (Original) Sensor element device according to claim 1, wherein said sensor element surface is formed by a surface of part of one of said conductive areas.
3. (Original) Sensor element device according to claim 2, wherein said sensor element device engages with a cover, wherein said sensor element surface is formed by a contact face between part of said conductive area and said cover.

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4. (Original) Sensor element device according to claim 1, wherein said conductive areas and said at least one insulating area are mechanically interconnected.
5. (Original) Sensor element device according to claim 4, wherein said conductive areas are in one piece.
6. (Original) Sensor element device according to claim 1, wherein in an extension direction from said electrical contact zone to said sensor element surface said conductive areas run in roughly said same extension direction.
7. (Original) Sensor element device according to claim 6, wherein all said areas of said sensor element including said insulating areas run in said same extension direction.
8. (Original) Sensor element device according to claim 6, wherein said areas, considered in said extension direction, are elongated and have a longer extension in said extension direction than in another direction at right angles thereto.
9. (Original) Sensor element device according to claim 1, wherein said body is made from a rubbery material.
10. (Original) Sensor element device according to claim 9, wherein said rubbery material is made conductive with inclusions.
11. (Original) Sensor element device according to claim 1, wherein said body is part of a strand, an extension direction of said areas being perpendicular to a longitudinal direction of said strand.

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12. (Original) Sensor element device according to claim 11, wherein said strand in a basic state, in said longitudinal direction, is linear and is bendable in a direction at right angles to an extension direction of said areas.

13. (Cancelled)

14. (Original) Sensor element device according to claim 13, wherein said conductive areas are separated from one another in each direction.

15. (Original) Sensor element device according to claim 13, wherein in a direct connection between two mutually closest of said conductive areas is provided an insulating area or an air gap.

16. (Original) Sensor element device according to claim 1, wherein said body is cuttable or separable to size at junction points of two said areas.

17. (Original) Sensor element device according to claim 1, wherein said electrical contact zone has contacts and said contacts at least have a mutual spacing of two said conductive areas.

18. (Currently amended) Sensor element device according to claim 17, wherein several of said ~~inductive~~ conductive areas are located between two mutually closest contacts.

19. (Original) Sensor element device according to claim 1, wherein one of said conductive areas is provided on a side directed towards said electrical contact zone with an insulating coating, said electrical contact zone having elongated and upwardly projecting contact pins pushing through said insulating coating in said conductive area in order to produce said electrical contact zone.

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20. (Cancelled)

21. (Original) Sensor element device according to claim 1, wherein one if said conductive areas is completely enveloped by one or more insulating areas in a lateral direction at right angles to its extension direction.

22. (Withdrawn) Method for the manufacture of a body as a sensor element for a capacitive sensor element device, said body forming said sensor element, wherein conductive areas are formed made from electrically conductive, three-dimensional shape-variable, elastic, compressible material and said conductive areas are linked by insulating areas made from three-dimensional shape-variable, elastic, compressible, insulating material.

23. (Withdrawn) Method according to claim 22, wherein said connection takes place by adhesion.

24. (Withdrawn) Method according to claim 22, wherein a strand in a direction of said extension of conductive and insulating areas in juxtaposed form is made much longer than said body and individual of said bodies are produced by separation.

25. (New) A sensor element device for a capacitive contact switch, the sensor element device comprising a three-dimensional shape-variable, elastic, compressible body,
wherein said body is at least zonally electrically conductive,
wherein said sensor element device has an electrical contact zone for contact to a control and a sensor element surface,
wherein said body extends from said electrical contact zone to said sensor element surface and has different areas,

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wherein one of said areas is a conductive area being electrically conductive throughout between said electrical contact zone and said sensor element surface, and another of said areas is an insulating area not being electrically conductive, and

wherein there is at least one said insulating area between several of said conductive areas.

26. (New) Sensor element device according to claim 25, wherein said sensor element surface is formed by a surface of part of one of said conductive areas.

27. (New) Sensor element device according to claim 25, wherein said sensor element device engages with a cover, wherein said sensor element surface is formed by a contact face between part of said conductive area and said cover.

28. (New) Sensor element device according to claim 25, wherein said conductive areas and said at least one insulating area are mechanically interconnected.

29. (New) Sensor element device according to claim 25, wherein said conductive areas are in one piece.

30. (New) Sensor element device according to claim 25, wherein in an extension direction from said electrical contact zone to said sensor element surface said conductive areas run in roughly said same extension direction.

31. (New) Sensor element device according to claim 25, wherein all said areas of said sensor element including said insulating areas run in said same extension direction.

32. (New) Sensor element device according to claim 25, wherein said areas, considered in said extension direction, are elongated and have a longer extension in said extension direction than in another direction at right angles thereto.

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33. (New) Sensor element device according to claim 25, wherein said body is made from a rubbery material.

34. (New) Sensor element device according to claim 25, wherein said rubbery material is made conductive with inclusions.

35. (New) Sensor element device according to claim 25, wherein said body is part of a strand, an extension direction of said areas being perpendicular to a longitudinal direction of said strand.

36. (New) Sensor element device according to claim 25, wherein said strand in a basic state, in said longitudinal direction, is linear and is bendable in a direction at right angles to an extension direction of said areas.

37. (New) Sensor element device according to claim 25, wherein said conductive areas are separated from one another in each direction.

38. (New) Sensor element device according to claim 25, wherein in a direct connection between two mutually closest of said conductive areas is provided an insulating area or an air gap.

39. (New) Sensor element device according to claim 25, wherein said body is cuttable or separable to size at junction points of two said areas.

40. (New) Sensor element device according to claim 25, wherein said electrical contact zone has contacts and said contacts at least have a mutual spacing of two said conductive areas.

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41. (New) Sensor element device according to claim 25, wherein several of said conductive areas are located between two mutually closest contacts.

42. (New) Sensor element device according to claim 25, wherein one of said conductive areas is provided on a side directed towards said electrical contact zone with an insulating coating, said electrical contact zone having elongated and upwardly projecting contact pins pushing through said insulating coating in said conductive area in order to produce said electrical contact zone.

43. (New) Sensor element device according to claim 25, wherein an insulating area forms a dielectric between two of said conductive areas in such a way that transverse capacitances or capacitive connections are formed between the said conductive areas.

44. (New) Sensor element device according to claim 25, wherein one if said conductive areas is completely enveloped by one or more insulating areas in a lateral direction at right angles to its extension direction.